Force Protection Technology

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June 2003

Overview

- Integrated Base Defense
- System Effectiveness Assessment
- Force Protection Technology
- Integrated Base Defense Security System
- Force Protection Common Operating Picture

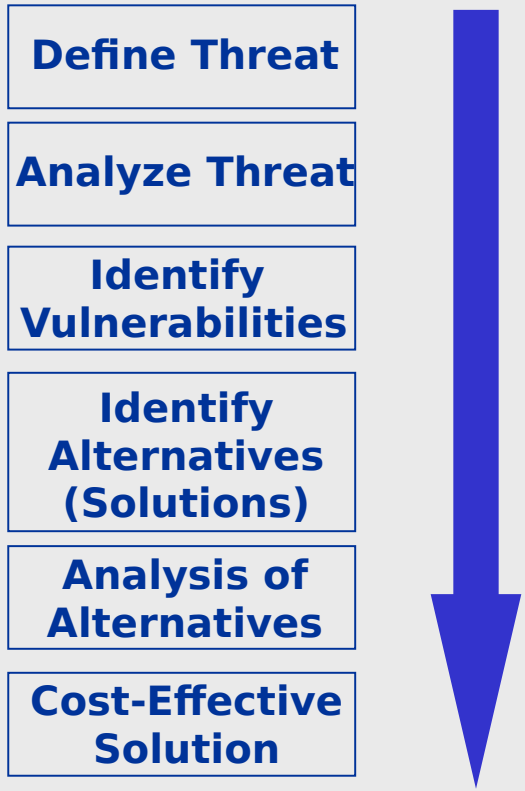
Integrated Base Defense

- **The integrated application of security systems taken across the Force Protection (FP) battlespace and extending beyond the physical perimeter into an area of influence and interest**
- **Involves the integrated use of tactics, techniques, procedures, and technology**
  - **Includes Transformational "Leap Ahead" Technologies**
- **IBD Security System (IBDSS) requirements identified in the (draft) IBDSS ORD**
  - **Area intrusion detection, access control, alarm assessment and reporting, integrated C2 and display, delay/denial**

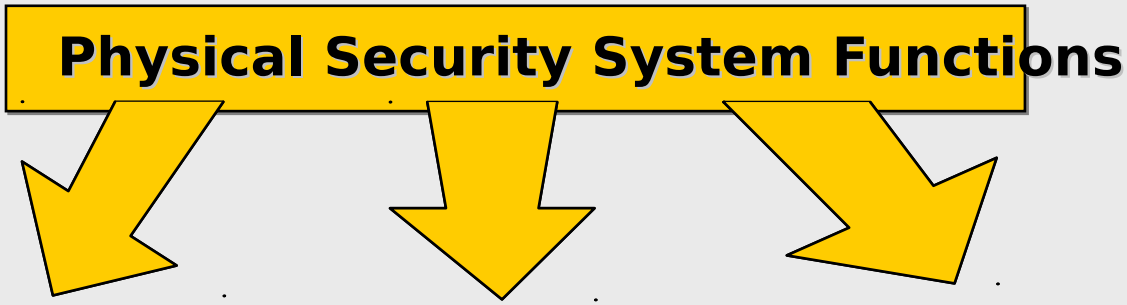
"See First, Understand First, Act First"

New Approach - Effects Based

- **Performance vice compliance based physical security system design and evaluation methodology**
  - Systems approach based on risk, consequence, & performance
  - Identifies effectiveness of existing and conceptual systems
  - Identifies risk to resources
  - Treats all aspects of an area as one system
    - Technology, equipment, manpower, policy, procedures
  - Modeling & Simulation
  - Employs teaming approach
    - Right people at right time



Physical Security System Functions



Detection

- Intrusion Sensing
- Alarm Communication
- Alarm Assessment
- Entry Control

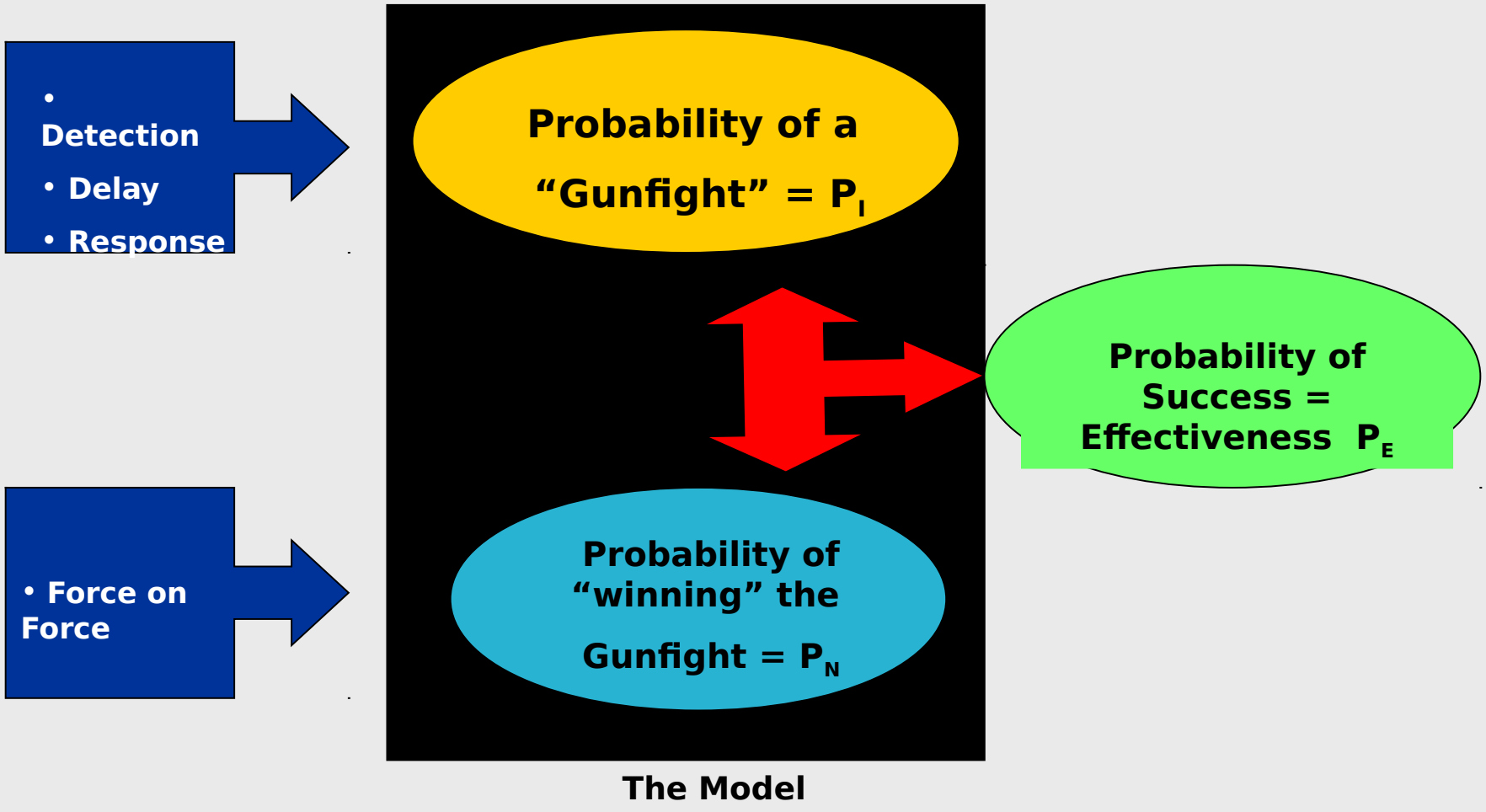
Delay

- Passive Barriers
- Active Barriers

Response

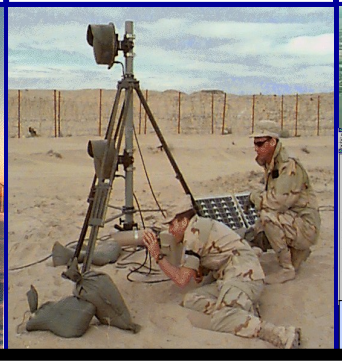
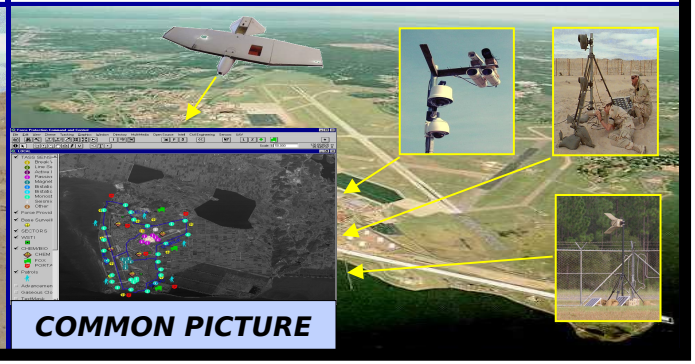
- Interruption:
  - Communication to Response Force
  - Deployment of Response Force
- Neutralization

Systems Effectiveness Assessment


• Detection
• Delay
• Response
• Force on Force
Probability of a "Gunfight" = P_I
Probability of "winning" the Gunfight = P_N
Probability of Success = Effectiveness P_E

The Model

Force Protection Technology

MK1 Eyeballs	Electrons in Close Formation	Integrated Circuits	Integrated Base Defense 2005
➢ Close-In ➢ Close Boundary ➢ Preventive Perimeter ➢ Distant Support	➢ SPCDS ➢ Fence Sensor ➢ Buried Line Sensor ➢ CCTV	➢ TASS ➢ AECS	➢ Standoff Detection ➢ Track ➢ Classify ➢ IFF ➢ Non-lethal Denial ➢ IBD C2
1.0 Pd (Assumed) .2 Pd (Reality)	.95 Pd @ 90 Fixed	.90 Pd @ 90 Deployable	Effects-Based
P-51	F-4	F-15	F-22
			

F-22 will give us a leap in capability over the F-15 as the F-15 gave us over the F

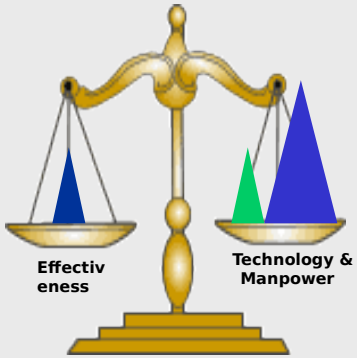
Gen John P. Jumper

"The Pathfinder Project"

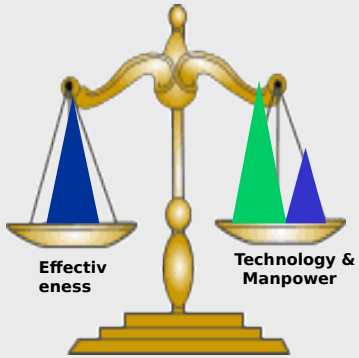
Description

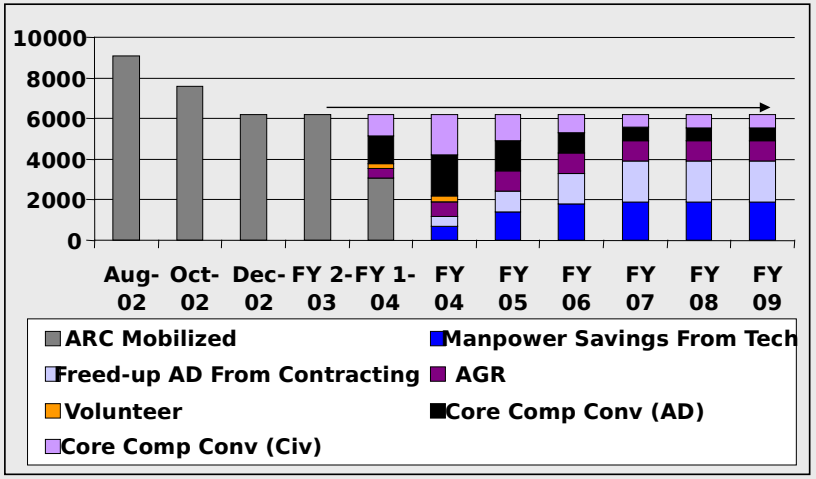
- "Pathfinder Bases" are benchmarks to determine effects and cost of technology
  - Andrews AFB selected as first "Pathfinder
- Pathfinder consists of tailored and scalable tactics, techniques, procedures and transformational technologies
- Focused on reducing the current reliance on manpower

Today



Tomorrow





Why IBDSS?

- **Integrated Base Defense (IBD) CONOPS 2020:**
  "…emergent needs demand an accelerated effort to adopt the integrated base defense mindset and incorporate advanced technology into our tactics, techniques, and procedures."
- **Directions from BGen Shamess, USAF/XOF:**
  -- The key to optimization of manpower associated with base defense is the integration of security systems to remove stovepipes and provide the defender with

IBDSS will be the enabler for this vision

Effects-Based IBD Physical Security System Acquisition and Integration

Required IBD Elements

- Anticipate
- Deny
- Detect
- Assess
- Delay
- Neutralize

Performance Based IBD Technology Acquisition

- Design
- Engineer
- Procure
- Install / Integrate
- Test

[OPERATE]

- Sustain
- Dispose

IBD Physical/ Electronic Security System

INTEGRATION

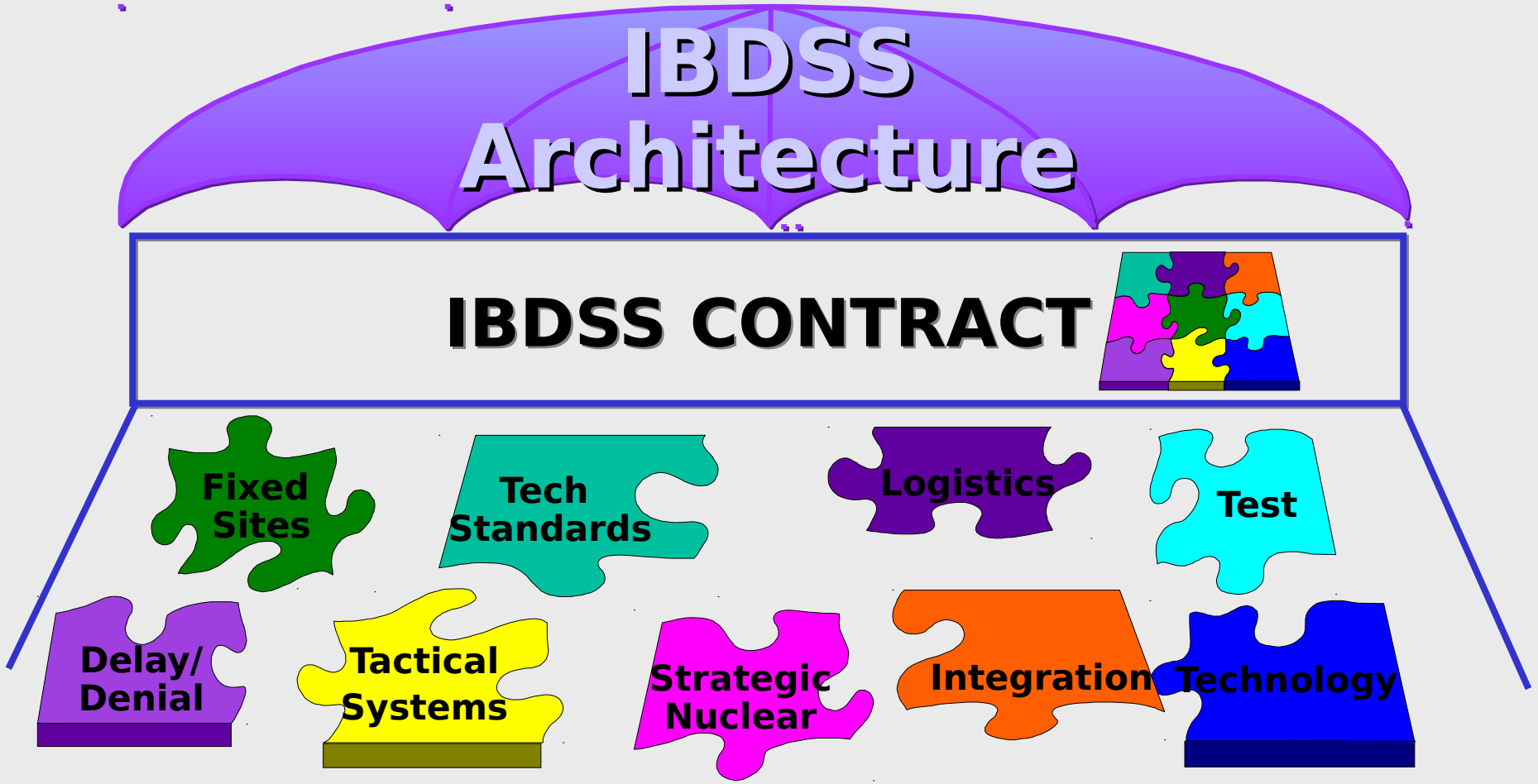
- People
- IBD Plan
- AC2ISR
- Firepower
- TTP

SYSTEM OBJECTIVE (AFI 31-101)

- "greatest possible deterrence"
- "maximum means to achieve:
  - detection
  - interception, and
  - defeat of a hostile force

"Quality Security Solutions - On Time, On Cost, and As Promised"

Acquisition Strategy



Building

the

Force Protection Common Operating

Common Interface Standard: XML/XLS

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Force Protection Common Operating Picture

Translates to Output

Full Spectrum Threat Response

Chemical TIB Picture
Biological TIB Picture
Environmental Picture
Radiological/Nuclear/TIR Picture
Fire Picture
Medical Picture
High Yield Explosive Picture

Security Forces Picture

Threat Management
Access Management
Delay/Denial/Response

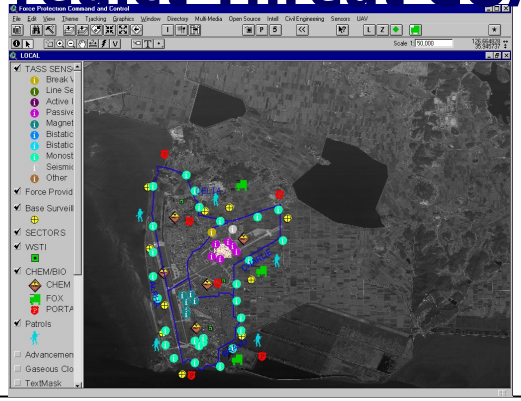
How to "Connect the Dots"

Smart Sensors
Plug into the Force Protection Picture

Dominate The Battlespace

SEE FIRST

- Relentless Data Capture
- Detect/Identify Threat
- Predict Threat COAs



UNDERSTAND FIRST

- Tailor Defense Plans
- Identify
- V
- K
- R

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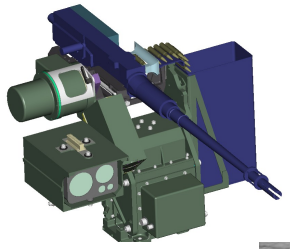

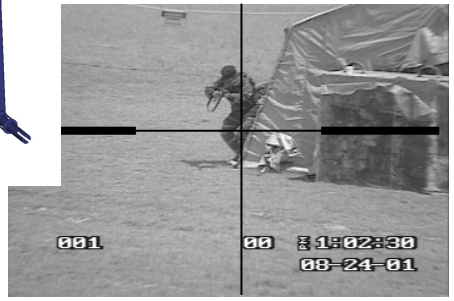

ACT FIRST

- Determine Options
- Decide First
- Act to Remove Threat